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2 of 3

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

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| In re Application of: **RICHARD ALAN DAYAN, ET AL.** | § | Docket No.: **RP9-99-125** |
| Serial No.: **09/455,104** | § | Examiner: **COLIN, CARL G.** |
| Filed: **3 DECEMBER 1999** | § | |
| Title: **SYSTEM AND METHOD FOR SECURING A PERSONAL COMPUTER BUS** | § | Group Art Unit: **2136** |

# APPEAL BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Brief is submitted in triplicate in support of the Appeal in the above-identified application.

CERTIFICATE OF MAILING
37 C.F.R. § 1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service on the below listed date with sufficient postage for first class mail in an envelope addressed to: Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: 07-16-2004 By: Shmoe Lauder
Signature

## REAL PARTY IN INTEREST

International Business Machines Corporation, the assignee of record, is the real party in interest in the subject Appeal.

## RELATED APPEALS AND INTERFERENCES

No appeals or interferences known to Appellant, Appellant's legal representative, or assignee will directly affect or be directly affected by or have a bearing on the Board's decision in the present Appeal.

## STATUS OF THE CLAIMS

Claims 1-12 were originally presented in the present Application. Responsive to the Non-Final Rejection dated October 6, 2003 and labeled Paper No. 4, Amendment A, having a mailing date of December 23, 2003, was entered, canceling Claims 1-12 and adding Claims 13-21. All pending Claims 13-21 were finally rejected in the Final Rejection dated March 25, 2004 and labeled Paper No. 6. The rejection of each grouping of Claims 13-15, 16-19 and 20-21 is appealed.

## STATUS OF AMENDMENTS

Amendments to Claims 13 and 19 were filed under 37 C.F.R. § 1.116 on April 12, 2004. An Advisory Action, dated April 27, 2004, stated that the amendments to Claims 13 and 19 were not entered by the Examiner, whose position is that the clarifying term "selectively locked out" when describing a disabled input device "would require further consideration and/or search."

## SUMMARY OF THE INVENTION

As described in the present specification at page 5, line 9 *et seq.*, the following is a brief exemplary description of one embodiment of the present invention. During a Power On Self Test (POST), a dedicated keyboard is disabled. In response to the dedicated keyboard being disabled, a Universal Serial Bus (USB) port is disabled, thus preventing unauthorized keyboard access to the computer.

## ISSUES

(1) Is the Examiner's rejection of Claims 13 and 19 under 35 U.S.C. § 112 well-founded?

(2) Is the Examiner's rejection of Claims 13-19 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,223,284 to *Novoa et al.* (*Novoa*) well-founded?

(3) Is the Examiner's rejection of Claim 20-21 under 35 U.S.C. § 103(a) as unpatentable over *Novoa* in view of U.S. Patent No. 5,835,791, issued to *Goff et al.* (*Goff*) well-founded?

## GROUPING OF THE CLAIMS

For purposes of this Appeal, Claims 13-15 and 19 stand or fall together as Group I, Claims 16-18 stand or fall together as Group II, and Claims 20-21 stand or fall together as Group III.

## ARGUMENT

I. Group I – Introduction

Claims 13-15 and 19 stand finally rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,223,284 to *Novoa et al.* (*Novoa*). Further, Claims 13 and 19 stand finally rejected under 35 U.S.C. § 112, second paragraph. These rejections are not well founded and should be reversed.

A. The Specification supports Claim 13 and Claim 19

In paragraph 3 of the present Office Action, Claims 13 and 19 are rejected under 35 U.S.C. § 112, second paragraph, for using the term "disabled" when describing a USB input device, which the specification describes as being connected to a USB bus 88. The USB bus 88 can be locked or unlocked by a security unit 82, thus preventing inputs from the USB input device (e.g., a keyboard) from reading a USB host controller 30. However, a USB keyboard sensing unit 84 can still monitor transmissions from the USB keyboard for entry of a password that will unlock the bus 88. (Original Specification, Page 10, line 18 to Page 11, line 14.)

The Examiner states, in essence, that the keyboard can never be "disabled" since it can still send a password signal, and states that "disabled" is the same as "completely disabled." Applicants respectfully disagree.

In order to properly construe claim terminology during examination, including the term disabled as employed in Claims 13 and 19, the proper standard of claim construction must first be adopted. MPEP 2111 sets forth that standard as follows: "During patent examination, the pending claims must be 'given their broadest reasonable interpretation consistent with the specification.' *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000)." This standard is further elucidated in MPEP 2111.01, which states: "When not defined by applicant in the specification, the words of a claim must be given their plain meaning ... as they would be interpreted by those of ordinary skill in the art. *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342, 60 USPQ2d 1851,

1854 (Fed. Cir. 2001)." See also, *Toro Co. v. White Consol. Indus., Inc.*, 199 F. 3d 1295, 1299, 53 USPQ2d 1065, 1067 (Fed. Cir. 1999)("[W]ords in patent claims are given their ordinary meaning in the usage of the field of the invention ..."). By synthesizing the foregoing citations from the MPEP, it is evident that the appropriate standard for claim construction during examination is that a claim term not defined in the specification must be (1) given its broadest reasonable interpretation (2) consistent with the specification (3) as that claim term would be understood by those having ordinary skill in the art (4) as used within the field of the invention.

When read in the context of the cited portion of the specification, it is clear that the "disabled" state refers to the condition of preventing "data from reaching the USB host controller 30 and the microprocessor" (original specification, page 11, lines 1-2), NOT totally and permanently disabling a USB keyboard. That is, the USB input device is disabled to the extent that standard signals are unable to reach the central processor, but the keyboard portion of the input device is still capable of inputting unlocking password signals.

To hold that "disabled" means "totally disabled" is contrary to the broadest reasonable interpretation of the term that is consistent with the specification. The Examiner's position requires "disabled" to mean totally and permanently disabled, which the specification clearly teaches away from. The Examiner's limited definition for the term "disabled" is unfounded when read in the context of the claim and the specification, and thus the rejection should be withdrawn.

B. *Novoa* does not teach or suggest each feature of exemplary Claim 13

With reference to exemplary Claim 13 (and its dependent claims), the cited prior art does not teach or suggest "allowing a user input at the input device during POST by at least temporarily overriding the control preventing a user input during the POST if the user successfully satisfies the authorization test," and a "second input device" that "is disabled only if the first input device is prevented from inputting a signal during the POST."

The Examiner admits that *Novoa* does not teach this feature (Paper No. 6, Page 5, Lines 5-6).

Nonetheless, the Examiner states that since *Novoa* teaches a "security option of disabling the keyboard (see column 7, lines 56-60) and another security option of disabling USB port for preventing user input (see column 8, lines 7-9)...it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of **Novoa et al.** to disable a second input device connected to the USB port only if the first input device is prevented from inputting a signal" (Paper No. 6, Page 5, Lines 6-12). Again, there is no teaching or suggestion of making one event (disabling the second input device) dependent on another event (the first input device being prevented from inputting a signal during POST).

The Examiner then states that *Novoa* makes this dependency feature obvious in Column 7, Line 62 through Column 8, Line 9. However, this passage simply teaches that an administrator can selectively disable different types of input and output devices and/or interfaces. There is no teaching or suggestion of making the disabling of a second input device dependent on a first input device being prevented from inputting a signal during POST.

As the cited prior art does not teach or suggest all of the features of exemplary Claim 13, Applicants respectfully request a notice of allowance of exemplary Claim 13 and other related pending claims.

Thus, the rejection of all Claims in Group I should be reversed.

II. Group II – Introduction

Claims 16-18 stand finally rejected under 35 U.S.C. § 103(a) as unpatentable over *Novoa*. That rejection is not well founded and should be reversed.

*Novoa* does not teach or suggest each feature of exemplary Claim 16

Exemplary Claim 16 claims the feature of "disabling...a dedicated keyboard...while...Post is executing"... "and in response to the dedicated keyboard being disabled, disabling...a Universal Serial Bus (USB) port on the computer." On Page 6 of the Final Office Action, labeled Paper 6, the Examiner has rejected Claim 16 on essentially the same grounds as used against Claim 13. The arguments presented in this Appeal Brief for exemplary Claim 13 are herein incorporated by reference in their entirety for exemplary Claim 16, and will not be reiterated here.

The Examiner states that "one skilled in the art would have been motivated to disable a USB port in response to the dedicated keyboard being disabled in order to prevent users from transferring data through the USB interface as a measure of security (see column 7, line 62 through column 8, line 9) as suggested by Novoa et al." Again, the cited passage teaches only that an administrator can selectively enable/disable input/output devices, and does not teach or suggest the feature of "disabling...a...USB port" "in response to the dedicated keyboard being disabled."

Thus, the rejection of all claims in Group II should be reversed.

III. Group III – Introduction

Claims 20-21 stand finally rejected under 35 U.S.C. § 103(a) as unpatentable over *Novoa* in view of U.S. Patent No. 5,835,791, issued to *Goff et al.* That rejection is not well founded and should be reversed.

A. The Specification supports base Claim 19

Claims 20-21 depend on Claim 19, which has been rejected under 35 U.S.C. § 112, second paragraph. As such, the arguments against this rejection are herein incorporated by reference, and are not reiterated here.

B. The cited prior art does not teach or suggest each feature of exemplary Claim 20

With regards to exemplary Claim 20, the cited prior art does not teach or suggest "monitoring the USB port for an enabling password, the enabling password permitting the dedicated keyboard to be re-enabled." The Examiner cites *Goff* for teaching this feature in *Goff* claim 10. However, *Goff* claim 10 discloses, as does the specification of *Goff*, a method for selecting data from a first or second keyboard according to whether a first or second controller-to-host interface is active. There is no teaching or suggestion of an "enabling password permitting the dedicated keyboard to be re-enabled" (Claim 20) or for an "enabling password permitting the USB port to be re-enabled" (Claim 21).

Thus, the rejection of all claims in Group III should be reversed.

IV. Conclusion

In view of the reasons stated above, Appellants respectfully request that the Board reverse the rejection of exemplary Claims 13, 16 and 19, and all claims dependent there from, including all claims in Groups I, II and III.

Please charge IBM Corporation Deposit Account No. **50-0563** in the amount of $330.00 for submission of a Brief in Support of Appeal. No additional fee is believed to be required; however, in the event an additional fee is required please charge that fee to Deposit Account No. **50-0563**.

Respectfully submitted,

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## APPENDIX A

Claims 1-12. (Cancelled)

Claim 13. A computer comprising:

a processor;

a memory having a memory address space, the memory address space comprising a stored program, the stored program including a power-on-self-test (POST);

a first input device operatively connected to the processor;

an adapter read-only-memory (ROM) located in certain blocks of the memory address space;

a control associated with the POST for preventing an input from the first input device during the POST to prevent user inputs from entering the memory;

a security signature in the adapter ROM for identifying if the first input device may temporarily accept a user input;

a ROM security routine for determining if user input is required and further including a test for user authorization;

an indicator stored in the memory for permitting a user input during at least a portion of the POST, with the processor responding to the indicator and allowing a user input at the input device during POST by at least temporarily overriding the control preventing a user input during the POST if the user successfully satisfies the authorization test; and

a second input device operatively connected to a Universal Serial Bus (USB) port in the computer, wherein the second input device is disabled only if the first input device is prevented from inputting a signal during the POST.

Claim 14. The computer of claim 13, wherein the first input device is a keyboard communicating with the computer via a dedicated keyboard port.

Claim 15. The computer of claim 14, wherein the keyboard is a PS/2 keyboard.

Claim 16. A method comprising:

disabling, via a first mechanism, a dedicated keyboard coupled to a dedicated keyboard port of a computer while a Power-On-Self-Test (POST) is executing in the computer; and

in response to the dedicated keyboard being disabled, disabling, via a second mechanism, a Universal Serial Bus (USB) port on the computer.

Claim 17. The method of claim 16, further comprising monitoring the USB port for an enabling password, the enabling password permitting the dedicated keyboard to be re-enabled.

Claim 18. The method of claim 16, further comprising monitoring the USB port for an enabling password, the enabling password permitting the USB port to be re-enabled.

Claim 19. A computer comprising:

a first mechanism for disabling a dedicated keyboard coupled to a dedicated keyboard port of the computer; and

a second mechanism for disabling a Universal Serial Bus (USB) compliant keyboard coupled to the computer via a USB port, wherein the USB compliant keyboard is disabled only in response to the dedicated keyboard being disabled.

Claim 20. The computer of claim 19, further comprising a keyboard sensing switch for monitoring the USB port for an enabling password, the enabling password permitting the dedicated keyboard to be re-enabled.

Claim 21. The method of claim 19, further comprising a keyboard sensing switch for monitoring the USB port for an enabling password, the enabling password permitting the USB port to be re-enabled.